

REMARKS

Re-examination and allowance of the present application is respectfully requested.

By the current amendment, Applicant cancels, without prejudice, claims 1-4 and 6-10, and submits new claims 11-14. Claims 5-9 were previously canceled. Thus, claims 11-14 remain pending for examination.

In the Office Action mailed on December 15, 2008, claims 1-4 and 6-10 are objected to as containing informalities. As these claims have now been canceled, Applicant submits that the ground for this rejection no longer exists, and respectfully requests that it be withdrawn.

Claims 9 and 10 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 6,330,534 to YASUNAGE et al. Claims 1, 3, 4 and 6-10 stand rejected under 35 U.S.C. §103(a) as being obvious over YASUNAGE et al. in view of U.S. Patent 5,774,838 to MISEKI et al., while claim 2 stands rejected under 35 U.S.C. §103(a) as being obvious over YASUNAGE et al. in view of MISEKI et al, and further in view of Japanese document 2001-184097 assigned to MITSUBISHI ELECTRIC CORP. Applicant respectfully traverses all grounds of rejection.

According to a claimed embodiment of the present invention, an excitation vector waveform candidate of a predetermined channel is associated with an excitation vector waveform candidate of another channel, such that the excitation vector waveform candidate of the predetermined channel changes in association with a change of a number representing the excitation vector waveform candidate of the another channel. An excitation vector waveform that minimizes coding distortion is searched for using the associated excitation vector waveform candidate of the predetermined channel and the excitation vector waveform candidate of the another channel. A code of the excitation vector of the stochastic codebook is then determined using a code of the excitation vector waveform obtained by the searching operation. In this regard, the searching operation calculates a function value using the number representing the

changed excitation vector waveform candidate of the another channel and the excitation vector waveform candidate of the predetermined channel changed based on the associating, and, by the function value, finds an excitation vector waveform candidate of each channel that minimizes the coding distortion. The determining operation finds the code of the excitation vector waveform by coding the excitation vector waveform candidate of each channel that minimizes the coding distortion as the excitation vector waveform, and determines the code of the excitation vector of the stochastic codebook using the code of the excitation vector waveform.

Applicant submits that this combination of features is neither disclosed by YASUNAGA et al., nor suggested by the combination of YASUNAGA et al. and MISEKI et al. suggested by the Examiner.

YASUNAGA discloses that where a plurality of channels are provided, a fixed waveform is stored for each channel. Each fixed waveform is arranged in a start position and an excitation vector is generated by adding the fixed waveforms. See, for example, column 32, lines 5-26 of YASUNAGA et al.

Applicant submits that YASUNAGA et al. fails to include any disclosure that is equivalent to the features of the presently claimed invention of providing a number representing an excitation vector waveform candidate of a channel and changing, in association with changes of that number, the excitation waveform candidate of a predetermined channel.

Applicant further submits that YASUNAGA et al. fails to disclose associating an excitation vector waveform candidate of a predetermined channel with an excitation vector waveform candidate of another channel, such that the excitation vector waveform candidate of the predetermined channel changes in association with a change of a number representing the excitation vector waveform candidate of the another channel, as recited in the pending claims.

In view of the above, Applicant submits that YASUNAGA et al. fails to disclose each and every feature of the claimed invention, and thus, fails to anticipate Applicant's claimed invention. Accordingly, Applicant submits that the ground for the 35 U.S.C. §102 rejection no longer exists, and respectfully requests that this ground of rejection be withdrawn.

Applicant further submits that MISEKI et al. fails to disclose that which is lacking in YASUNAGA et al. MISEKI et al. discloses a noise codebook pre-selection, remainder operation that is performed with respect to vector element positions upon determining inner products between code vectors. See, for example, column 17, lines 26-67 of MISEKI et al. Applicant submits that this bears no relationship to Applicant's claimed feature of associating an excitation waveform candidate of a predetermined channel with an excitation waveform candidate of another channel using a result of remainder operation, recited in the herein-contained amendment claims. Thus, if one attempted to combine the teachings of YASUNAGA et al. and MISEKI et al. in the manner suggested by the Examiner, one would fail to arrive at the presently claimed invention, in which an excitation waveform candidate of a predetermined channel is associated with an excitation waveform candidate of another channel using a result of remainder operation. Thus, Applicant submits that the presently claimed invention is not obvious over the combination of YASUNAGA et al. and MISEKI et al. suggested by the Examiner.

Applicant also submits that MISEKI et al. fails to disclose (or suggest) associating an excitation vector waveform candidate of a predetermined channel with an excitation vector waveform candidate of another channel such that the excitation vector waveform candidate of the predetermined channel changes in association with a change of a number representing the excitation vector waveform candidate of the another channel, as recited in Applicant's independent claim 11.

Still further, Applicant submits that MISEKI et al. and YASUNAGA et al. each fail to disclose or suggest Applicant's claimed feature of associating an excitation vector waveform candidate of a predetermined channel with an excitation vector waveform candidate of another channel, such that the excitation vector waveform candidate of the predetermined channel changes in association with a change of a number representing the excitation vector waveform candidate of the another channel, calculating a function value using the number representing the changed excitation vector waveform candidate of the another channel and the excitation vector waveform candidate of the predetermined channel changed based on the associating, and, by the function value, finding an excitation vector waveform candidate of each channel that minimizes a coding distortion.

In view of the above, Applicant submits that the combination of references set forth by the Examiner (e.g., YASUNAGA et al. and MISEKI et al.) fail to render obvious Applicant's invention, as defined by the pending claims. Accordingly, the Examiner is respectfully requested to withdraw the 35 U.S.C. §103 rejection in view of the combination of YASUNAGA et al. and MISEKI et al., and to indicate the allowability of the pending claims.

Applicant further submits that MITSUBISHI ELECTRIC fails to disclose or even suggest that which is lacking from YASUNAGA et al. and/or MISEKI. That is, MITSUBISHI ELECTRIC fails to at least disclose or suggest associating an excitation vector waveform candidate of a predetermined channel with an excitation vector waveform candidate of another channel, such that the excitation vector waveform candidate of the predetermined channel changes in association with a change of a number representing the excitation vector waveform candidate of the another channel. Thus, Applicant submits that the combination of these three references in the manner set forth by the Examiner would fail to result in Applicant's claimed

combination. As a result, Applicant respectfully requests withdrawal of this ground of rejection, along with an indication of the allowability of the pending claims.

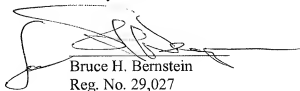
SUMMARY AND CONCLUSION

In view of the fact that none of the art of record, whether considered alone or in combination, discloses or suggests the present invention as now defined by the pending claims, and in further view of the above amendments and remarks, reconsideration of the Examiner's action and allowance of the present application are respectfully requested and are believed to be appropriate.

Should the Commissioner determine that an extension of time is required in order to render this response timely and/or complete, a formal request for an extension of time, under 37 C.F.R. §.136(a), is herewith made in an amount equal to the time period required to render this response timely and/or complete. The Commissioner is authorized to charge any required extension of time fee under 37 C.F.R. §.17 to Deposit Account No. 19-0089.

If there should be any questions concerning this application, the Examiner is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,
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